- **Do not collect plants from the wild**
- **Buy nursery-propageted plant material**
- **Help prevent establishment of non-native species in natural communities**

FOR MORE INFORMATION ON NATIVE PLANTS:

Virginia Department of Conservation and Recreation
Natural Heritage Program
217 Governor Street
Richmond, VA 23219
(804) 786-7951
www.dcr.state.va.us

For a list of nurseries that propagate native plants:
Virginia Native Plant Society
400 Blandy Farm Lane, Unit 2
Boyce, VA 22620
(540) 568-8679
vnpsofc@shentel.net
www.vnps.org

For a list of nurseries in a particular region of Virginia contact:
The Virginia Nurseryman's Association*
383 Coal Hollow Road
Christiansburg, VA 24062-0278
(540) 382-0943
vna@swva.net

Chesapeake Bay Program
A Watershed Partnership

NOAA
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Stewardship
FOREST

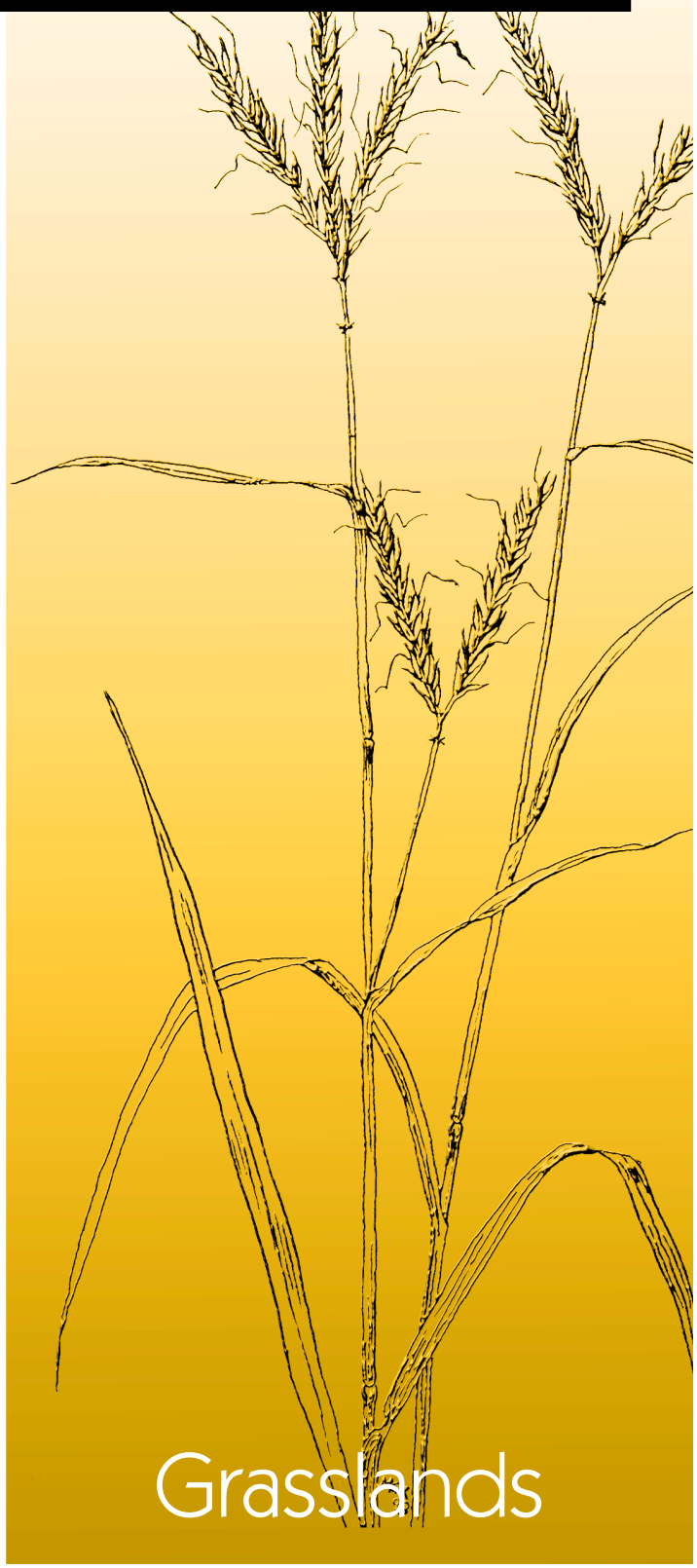
Virginia Native Plant Society
Conserving Wildflowers and Wild Places
Education-Research-Advocacy-Protection-Rescue-Propagation

DCR
Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

12/01

Native Plants for Conservation, Restoration and Landscaping

Celebrate and Preserve Our Natural Heritage



Grasslands

OUR NATURAL HERITAGE

Native plant species and natural communities provide many important values to human society. Erosion and flood control, animal habitat and nitrogen fixation are but a few of these values. On another level, native plants and the communities they form help create the unique character of a region. Cypress trees and magnolias evoke the South, just as Douglas-fir and redwoods call to mind the Pacific Northwest. By including native plant species in our land management and our gardens, we can contribute to the conservation of native species and ecosystems. We also preserve the charm and character that makes Virginia like no other place.

DCR's Natural Heritage Program works to identify, protect and restore Virginia's rare plant and animal species and natural communities. Natural Heritage scientists collect and manage information on the location, life history and ecology of Virginia's 1,650 rare plant and animal species and natural communities. This is part of our effort to carry out a continual inventory and assessment of Virginia's natural heritage. The state's Natural Area Preserve System now includes 33 preserves and protects more than 20,000 acres. Natural Heritage biologists provide stewardship on DCR preserves, other public lands and private lands to conserve and enhance natural heritage resources.

WHAT ARE NATIVE PLANTS?

Native species are those that occur in the region in which they have evolved. Plants and animals evolve in specific habitats over extended periods of time. This selective development is a response to physical and biotic processes characteristic of that region: climate; soils; seasonal rainfall, drought and frost; and interactions with other species occupying those habitats. Native plants therefore possess certain traits that make them uniquely adapted to local conditions.

In North America, plants are considered native if they were present here before European settlement. This distinction is made because of the many changes to the flora that have occurred since the arrival of Europeans. Since then, many non-native plants have been deliberately and accidentally introduced to North America from distant shores. Such plants are termed "aliens."

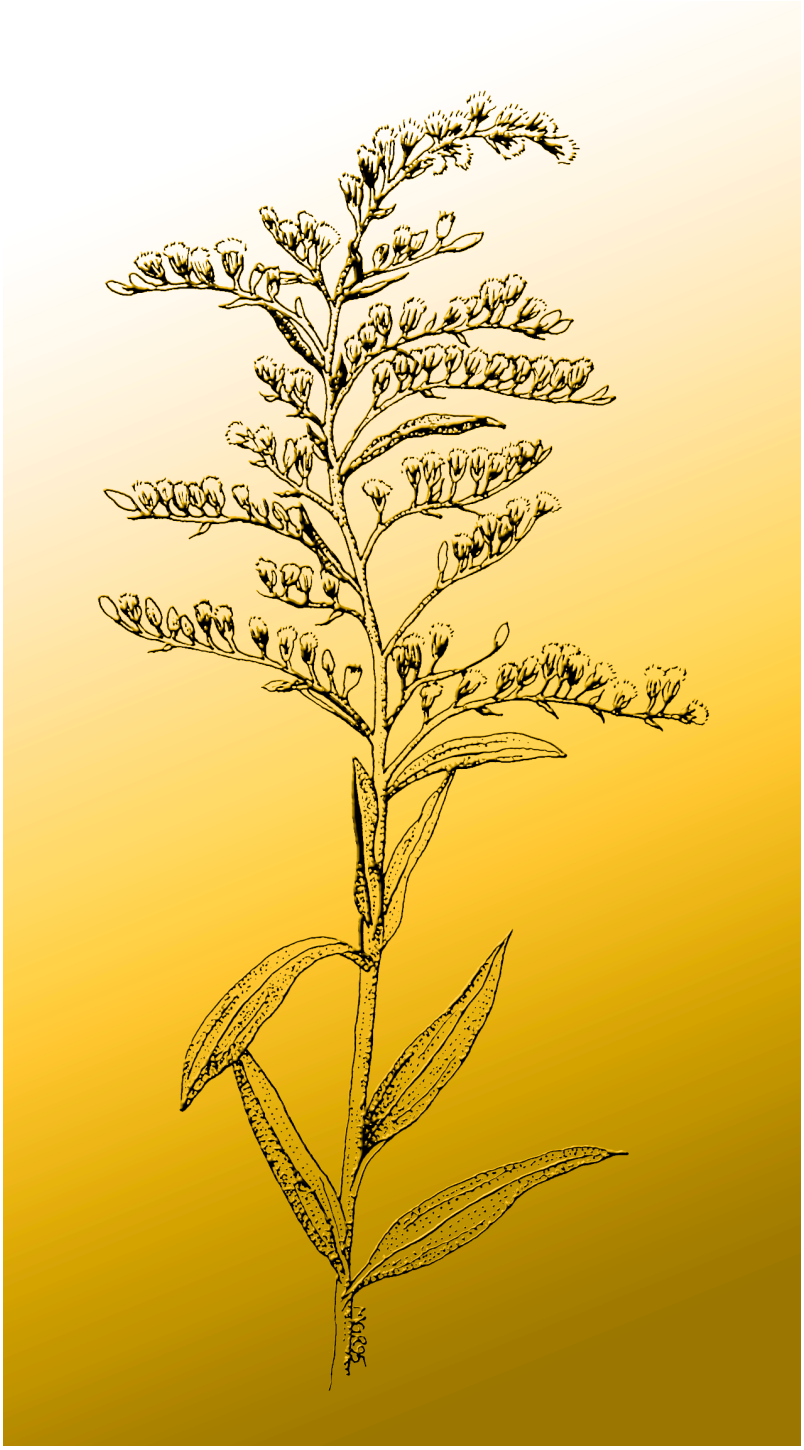
Alien species do not come only from distant countries. They may also be introduced from a different region of the same country. For instance, a species native to the west coast of North America would be considered alien if it became established on the east coast where it had not previously been a constituent of the regional flora.

NATIVES VS. ALIENS

While many alien plants are beneficial and do not adversely affect the natural environment, many invasive alien species pose a serious threat to both natural communities and rare species. Because of a lack of natural controls such as insect pests and competitors, some alien plants escape cultivation, establish in a new area and displace the native plant species. What was a finely woven and diverse natural community may become a monoculture dominated by the invasive alien plant. Along with the displacement of

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
Medium & Large Trees														
Diospyros virginiana	persimmon	•	•	•		•	•	•	•	•	•	•	•	
Liquidambar styraciflua+	sweetgum		•	•		•	•	•	•	•	•		•	•
Nyssa sylvatica	black gum	•	•	•		•	•	•		•	•		•	
Pinus serotina+	pond pine	•	•	•				•			•		•	•
Prunus pennsylvanica	pin cherry, fire cherry	•		•		•				•	•	•		
Prunus serotina+	wild black cherry	•		•		•	•	•		•	•	•		
Quercus coccinea	scarlet oak	•	•			•	•	•		•	•	•		
Quercus falcata	Southern red oak	•	•	•		•	•	•	•	•		•	•	
Quercus ilicifolia	bear oak	•		•		•	•				•	•		
Quercus montana	chestnut oak	•		•		•	•	•	•	•		•		
Quercus stellata	post oak	•	•	•		•	•	•			•	•		
Quercus velutina	black oak	•		•		•	•	•	•	•		•		
Robinia pseudoacacia	black locust			•		•	•	•		•	•		•	
Sassafras albidum	sassafras			•		•	•	•		•	•	•	•	

+ May be aggressive in garden setting.



Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
Viola pedata	bird's foot violet	•	•			•	•	•		•	•	•		
Yucca filamentosa	common yucca	•	•			•	•	•			•	•		
Zephranthes atamasco	Atamasco lily		•	•				•		•	•		•	•
Ferns														
Onoclea sensibilis+	sensitive fern		•	•		•	•	•		•	•		•	•
Osmunda cinnamomea	cinnamon fern		•	•		•	•	•	•	•			•	•
Woodwardia virginica+	Virginia chain fern		•	•				•	•	•	•		•	•
Grasses, sedges, rushes														
Agrostis perennans	autumn bentgrass			•		•	•	•	•	•	•	•	•	•
Andropogon gerardii	big bluestem	•	•	•	•	•	•			•	•	•	•	
Andropogon glomeratus	bushy bluestem		•	•		•	•	•		•	•		•	•
Andropogon virginicus	broomsedge		•	•		•	•	•		•	•	•	•	•
Arundinaria gigantea	wild cane, river cane	•		•		•			•	•	•	•	•	•
Calamagrostis canadensis	bluejoint reedgrass	•		•		•				•	•		•	•
Carex crinita var. crinita	long hair sedge	•	•	•		•	•	•		•	•		•	•
Carex lurida	sallow sedge	•		•		•	•	•		•	•		•	•
Carex stricta	tussock sedge	•		•		•	•	•		•	•		•	•
Danthonia sericea	silky oatgrass	•		•		•	•	•		•	•	•	•	
Danthonia spicata	poverty oatgrass	•		•		•	•	•	•	•	•	•	•	
Dichanthelium clandestinum	deer-tongue	•		•	•	•	•	•		•	•	•	•	•
Dulichium arundinaceum	dwarf bamboo	•		•	•	•	•	•		•	•			•
Elymus hystrix	bottlebrush grass	•	•			•	•	•	•	•	•	•	•	
Festuca rubra	red fescue	•		•	•	•				•	•	•	•	
Juncus canadensis	Canada rush	•		•			•	•		•	•		•	•
Juncus effusus	soft rush	•		•		•	•	•		•	•		•	•
Leersia oryzoides	rice cutgrass	•		•		•	•	•		•	•		•	•
Panicum virgatum	switch grass	•	•	•		•	•	•		•	•	•	•	•
Saccharum giganteum	giant plumegrass	•	•	•			•	•		•	•		•	•
Schizachyrium scoparium	little bluestem	•	•	•	•	•	•	•		•	•	•	•	
Scirpus cyperinus	woolgrass bulrush	•	•	•		•	•	•		•	•		•	•
Sorghastrum nutans	Indian grass	•	•	•	•	•	•	•		•	•	•	•	
Tridens flavus	redtop	•	•	•	•	•	•	•		•	•	•	•	
Tripsacum dactyloides	gama grass	•	•	•	•	•	•	•		•	•		•	•
Zizania aquatica	wild rice	•	•	•				•			•			•
Shrubs														
Aronia arbutifolia	red chokeberry		•	•		•	•	•	•	•			•	•
Aronia melanocarpa	black chokeberry		•	•		•	•	•		•	•	•	•	•
Baccharis halimifolia	high tide bush		•	•				•			•	•	•	•
Ceanothus americanus	New Jersey tea	•	•	•		•	•	•		•	•	•		
Cornus amomum	silky dogwood	•		•		•	•	•	•	•			•	•
Myrica cerifera	Southern wax myrtle	•	•	•				•	•	•		•	•	
Myrica heterophylla	Southern bayberry	•	•	•				•	•	•		•	•	
Myrica pennsylvanica	Northern bayberry	•	•	•				•			•	•	•	•
Rhododendron catawbiense	Catawba rhododendron		•	•		•	•			•	•		•	
Rhododendron prinophyllum	rose azalea	•	•			•			•	•	•	•	•	
Rhododendron viscosum	swamp azalea		•	•		•	•	•		•	•		•	•
Rubus allegheniensis	Alleghany blackberry	•	•	•		•	•				•	•		
Salix humilis	prairie willow		•	•		•	•	•			•	•		
Salix sericea	silky willow		•	•		•	•	•		•	•		•	
Sambucus canadensis	common elderberry	•	•	•		•	•	•			•		•	•
Spiraea alba	narrow-lvd meadowsweet	•	•	•		•					•		•	
Spiraea latifolia	broad-leaved meadowsweet	•	•	•		•					•		•	
Small trees														
Amelanchier arborea	downy serviceberry	•	•	•		•	•	•		•	•		•	
Amelanchier canadensis	Canada serviceberry	•	•	•		•	•	•			•		•	•
Cercis canadensis	redbud (Eastern)		•	•		•	•	•	•	•			•	
Chionanthus virginicus	fringetree		•			•	•	•		•	•		•	
Rhus glabra	smooth sumac	•	•	•		•	•	•			•	•	•	
Rhus hirta	staghorn sumac	•	•	•		•	•	•			•	•		

native plant species from these natural habitats comes the loss of many flying, crawling and burrowing creatures that relied on the original diversity of plants for food, cover and shelter.

In contrast to invasive alien species, some non-native plants are unable to thrive without extra effort by gardeners. Such plants may have originated in regions with abundant rainfall and soils rich in nutrients. When introduced into a drier region with less fertile soil, they require additional water and fertilizer. Natural defenses plants evolve in their original habitats may not protect them in a new environment where the application of pesticides may be required to aid their growth. Native plants, on the other hand, are more likely to thrive under the local conditions and require less attention, labor and expensive additives.

NATIVE PLANTS AND WILDLIFE

Plants and animals evolve together to create unique natural communities, weaving a complex web of interrelationships. Flowers often bloom and fruits ripen in synchrony with the needs of the animals that pollinate the flowers and disperse the seeds. A butterfly feeds on the nectar of a certain flower and in turn pollinates the plant. To reap the greatest benefit, the flower must bloom and the butterflies emerge simultaneously. Later, the flower goes to seed just when songbirds are fattening for the autumn migration. Gorging themselves, the birds scatter much of what they fail to digest, thus helping disperse the plant's seed.

Alien plant species rarely keep time according to the internal clocks of our native wildlife. Their flowers may bloom too early or late, their fruits grow too large for resident birds to carry, their petals too long for a local nectar feeder to probe, and their smell and texture unrecognizable to a butterfly in search of a host plant on which to lay her eggs.

GRASSLANDS IN VIRGINIA

Grasslands, natural communities dominated by grass species, are of wide-ranging character and distribution in Virginia. From barrier island dunes to mountain balds, grasslands occupy unusual places in our landscape. Some of these places are unique because of harsh or extreme environmental conditions. Examples include tidally influenced areas behind barrier islands where extensive saltmarsh and saltmeadow cordgrass communities thrive; dry, sunbaked southwestern slopes of mountains; and diabase glades, which have very shallow soils. These conditions thwar most woody species and allow sun-loving grasses and herbs to flourish. Grasslands also arise where recurring disturbance, such as drought, flood or fire, removes woody overstory species. These types of disturbance-dependant grasslands are sometimes called successional grasslands and are inevitably replaced by shrubs and trees unless maintained by a regular cycle of disturbance.

This brochure focuses on successional grasslands. Successional grasslands and closely related savannas were once much more common in Virginia. Savannas are open-canopy woodlands with a grass-dominated herb layer. Natural grasslands and savannas were maintained by lightning-set fires and human-set fires. Native Americans used fire routinely to clear land for agriculture and to enhance habitat for game.

Fires were also used to drive deer toward waiting hunters. Early European settlers adopted the practice of clearing land with fire. In the last 100 years, fire suppression became policy and practice. Technical and organizational advances increased the success of suppression efforts. During the 20th century, fire dependant natural communities, such as grasslands, savannas, seepage bogs, pocosins and longleaf pine forests, have decreased dramatically. Many rare plant and animal species are associated with these communities. Michaux's sumac is a federally endangered shrub found only in fire maintained savannas. Henslow's sparrow, listed as state threatened in Virginia, depends on grassland and savanna habitat for survival.

Today, the best occurrences of successional grasslands and savannas in Virginia are found in and around the artillery impact areas on three military bases: Quantico, Fort A.P. Hill and Fort Pickett. The regular fires ignited by artillery maintain the grasslands and savannas. Grasslands and bogs become established in another human-created niche: power-line rights-of-way. Mowing and herbiciding by power companies to control woody plants favor the sun-loving grasses and bog species. Many rare species and several rare plant communities are found in power-line rights-of-way.

GRASSLAND PLANT SPECIES

The six plant species that dominate most of our upland successional grasslands are bunch grass species called warm-season grasses. Big bluestem, little bluestem, bushy bluestem, broomsedge, Indian grass and switchgrass all have their growing season in the summer months. Many alien grass species introduced to the New World for livestock, such as tall fescue, are cool-season grasses. The warm-season species were also the dominant grasses in the prairies of the Midwest and Great Plains. The drier climate of those regions favors grasslands, whereas the moist climate of the East favors the development of forests.

Along with the grasses, many wildflower species are part of the grassland community. Among these are various species in the aster, pea and rose families. Common are black-eyed Susan, evening primrose and butterfly weed. Rare plant species found in and adjacent to grasslands include prairie white-fringed orchid, sun-facing coneflower and running glade clover.

In wet areas, such as seepages, pond edges and stream banks, hydric species take over from upland species. Hydric species are better adapted to higher levels of soil moisture than are upland species. Sedges and rushes are often more prevalent than grasses. Soft rush, tussock sedge, gama grass, cattail, blue flag and swamp milkweed are but a few species that may be found in wet areas that receive full sun. For more information on wetland species, see the DCR brochure *Native Plants for Conservation, Restoration and Landscaping – Riparian Forest Buffers.*

Recommended Uses
W = wildlife
H = horticulture
C = conservation
D = domestic livestock forage

Minimum Light Requirments
S = shade
P = partial sun
F = full sun

Native Regions
C = Coastal Plain
P = Piedmont
M = Mountains and Valley

Moisture Requirements
L = low
M = medium
H = high

Scientific Name	Common Name	Uses				Region			Light			Moisture		
		W	H	C	D	M	P	C	S	P	F	L	M	H
Forbs														
Acorus americanus	sweet flag		•	•		•	•	•		•	•			•
Antennaria neglecta	field pussytoes		•	•		•	•			•	•	•	•	
Asclepias incarnata	swamp milkweed	•	•	•		•	•	•		•	•			•
Asclepias syriaca+	common milkweed	•	•	•		•	•	•			•	•		
Asclepias tuberosa	butterfly weed	•	•	•		•	•	•			•	•		
Aster laevis	smooth blue aster	•	•	•		•					•	•		
Aster novae-angliae	New England aster		•	•		•				•	•	•	•	
Aster novi-belgii	New York aster	•	•	•				•		•	•		•	
Aster pilosus	white heath aster	•	•	•		•	•	•			•	•		
Aster umbellatus	flat-top white aster		•	•		•	•			•	•		•	•
Baptisia tinctoria	yellow wild-indigo	•	•			•	•	•		•	•	•		
Caltha palustris	marsh marigold		•	•		•		•		•	•			•
Chamaecrista fasciculata+	partridge pea			•		•	•	•			•	•	•	
Chrysogonum virginianum	green and gold		•	•		•	•	•	•				•	
Chrysopsis mariana	Maryland golden aster	•	•	•		•	•	•		•	•	•		
Clitoria mariana	Maryland butterfly pea		•	•		•	•	•	•	•		•		
Coreopsis tripteris	tall coreopsis		•	•		•	•	•		•	•		•	
Coreopsis verticillata	threadleaf coreopsis		•	•		•	•	•		•	•	•		
Desmodium paniculatum	narrow-leaf tick trefoil	•		•		•	•	•	•			•		
Eupatorium coelestinum	mistflower	•	•	•		•	•	•	•	•	•		•	
Eupatorium fistulosum	Joe Pye weed	•	•	•		•	•	•		•	•		•	
Eupatorium perfoliatum	common boneset			•		•	•	•		•	•		•	•
Helenium autumnale	sneezeweed	•	•	•		•	•	•		•	•		•	
Helianthus angustifolius	narrow-leaf sunflower	•	•	•			•	•		•	•		•	•
Helianthus divaricatus	woodland sunflower	•	•	•		•	•	•		•		•		
Heliopsis helianthoides	oxeye sunflower	•	•	•		•	•	•		•	•	•	•	
Iris prismatica	slender blueflag		•					•		•	•		•	•
Iris virginica	Virginia blue flag		•	•			•	•		•	•			•
Kosteletskya virginica	seashore mallow	•		•				•			•			•
Lespedeza capitata	round-head bush clover	•		•		•	•	•			•	•		
Liatris graminifolia	grass-leaf blazing star	•	•	•		•	•	•		•	•	•	•	
Liatris spicata	spiked blazing star	•	•	•		•				•	•		•	
Liatris squarrosa	plains blazing star	•	•	•			•			•	•		•	
Lilium canadense	Canada lily		•			•	•			•	•		•	•
Lilium philadelphicum	wood lily		•			•				•	•	•		
Lilium superbum	Turk's cap lily		•			•	•	•		•	•		•	•
Lobelia cardinalis	cardinal flower	•	•	•		•	•	•		•	•			•
Lobelia siphilitica	great blue lobelia	•	•	•		•	•	•	•	•				•
Lupinus perennis	lupine, sundial lupine		•			•	•	•		•	•	•		
Mimulus ringens	monkeyflower		•	•		•	•	•			•			•
Monarda didyma	bee balm	•	•	•		•			•	•			•	
Monarda fistulosa	wild bergamot	•	•	•		•	•	•		•	•	•	•	
Oenothera fruticosa	sundrops	•	•	•		•	•	•			•		•	•
Opuntia humifusa	Eastern prickly-pear	•	•	•		•	•	•			•	•		
Penstemon laevigatus	smooth beardtongue		•			•	•	•	•	•	•		•	
Physostegia virginiana	obedient plant		•	•		•	•			•	•		•	
Pycnanthemum incanum	hoary mountain mint	•		•		•	•	•	•			•		
Pycnanthemum tenuifolium	narrow-lvd mountain mint	•	•	•		•	•	•		•	•	•	•	
Rhexia virginica	Virginia meadow-beauty	•		•		•	•	•			•			•
Rudbeckia fulgida	early coneflower		•	•			•			•	•	•	•	
Rudbeckia hirta	black eyed Susan		•	•		•	•	•		•	•	•	•	
Rudbeckia laciniata	cut-leaved coneflower	•	•	•		•	•	•		•	•		•	
Rudbeckia triloba	three-lobed coneflower	•	•	•		•	•	•		•	•		•	
Sagittaria latifolia	broadleaf arrowhead	•	•	•		•	•	•			•			•
Salvia lyrata+	lyre-leaf sage			•		•	•	•		•	•	•		
Saururus cernuus	lizard's tail		•	•		•	•	•		•	•			•
Senecio aureus+	golden ragwort	•		•		•	•	•	•	•			•	•
Senna marilandica	Maryland wild senna		•	•		•	•	•		•		•	•	
Silphium perfoliatum	cup plant	•		•		•	•		•	•	•		•	
Solidago caesia	bluestem goldenrod	•	•	•		•	•	•	•	•			•	
Solidago rugosa+	rough-stemmed goldenrod	•		•		•	•	•		•	•		•	
Solidago sempervirens	seaside goldenrod	•	•	•				•		•	•		•	
Tradescantia virginiana	Virginia spiderwort		•	•		•	•	•	•	•	•		•	